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IS 4054 (1966): Neatsfoot Oil [FAD 13: Oils and Oilseeds]



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( Reaffirmed 1998 )

*Indian Standard*  
**SPECIFICATION FOR  
NEATSFOOT OIL**

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**REAFFIRMED**

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**BUREAU OF INDIAN STANDARDS  
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NEW DELHI 110002**

# *Indian Standard*

## SPECIFICATION FOR NEATSFOOT OIL

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# *Indian Standard*

## SPECIFICATION FOR NEATSFOOT OIL

### 0. FOREWORD

**0.1** This Indian Standard was adopted by the Indian Standards Institution on 24 November 1966, after the draft finalized by the Oils and Oilseeds Sectional Committee had been approved by the Chemical Division Council and the Agricultural and Food Products Division Council.

**0.2** Neatsfoot oil, also known as babulum oil, or hoof oil is used in leather industry for fat liquoring, waterproofing and softening of leather. It is also used for oiling wool and as lubricant.

**0.3** In the preparation of this standard, assistance has been derived from the data supplied by the Central Leather Research Institute, Madras and the Merck Index of Chemicals and Drugs, 1960, 7th Ed, published by the Merck & Co Inc., Rahway, New Jersey.

**0.4** For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS: 2-1960\*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

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### 1. SCOPE

**1.1** This standard prescribes the requirements and the methods of sampling and test for neatsfoot oil for use in leather industry.

### 2. TERMINOLOGY

**2.1** For the purpose of this standard, the definitions given under 2 of IS: 548-1964† shall apply.

### 3. REQUIREMENTS

**3.1 Description** — The material shall be obtained by solvent extraction or by boiling in water the shin bones and feet (deprived of hoofs) of cattle.

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\*Rules for rounding off numerical values (*revised*).

†Methods of sampling and test for oils and fats (*revised*).

## IS : 4054 - 1966

**3.2** The material shall be clear and of pale yellow colour; and free from adulterants, sediment, suspended and other foreign matter, separated water and added colouring matter.

**3.3 Admixture with Other Oils**—The material shall be free from admixture with other oils, when tested according to the methods prescribed under 20 of IS: 548-1964\*.

**3.4** The material shall also comply with the requirements given in Table 1.

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**TABLE 1 REQUIREMENTS FOR NEATSFOOT OIL**

(Clauses 3.4 and 7.1)

SL No.	CHARACTERISTIC	REQUIREMENT	METHOD OF TEST, REF TO	
			Appendix	Cl No. of IS: 548-1964*
(1)	(2)	(3)	(4)	(5)
i)	Refractive index at 40°C	1.458 0 to 1.461 0	—	10
ii)	Specific gravity at 30°/30°C	0.906 to 0.911	—	11
iii)	Iodine value (Wijs)	67 to 75	—	14
iv)	Unsaponifiable matter, percent by weight, <i>Max</i>	1.0	—	8
v)	Saponification value	192 to 198	—	15
vi)	Titre, °C	20 to 30	—	12
vii)	Acid value, <i>Max</i>	10	—	7
viii)	Solidification test	To pass test	A	—

\*Methods of sampling and test for oils and fats (*revised*).

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## 4. PACKING

**4.1** The material shall be supplied in suitable well-closed containers as agreed to between the purchaser and the supplier.

\*Methods of sampling and test for oils and fats (*revised*).



## 5. MARKING

5.1 The containers shall be marked with the name and weight of the material in the containers; manufacturer's name and trade-mark, if any, batch number; and the month and the year of manufacture.

5.1.1 The product may also be marked with Standard mark.

5.1.2 The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

## 6. SAMPLING

6.1 Representative samples of the material shall be drawn as prescribed under 3 of IS: 548-1964\*.

## 7. TESTS

7.1 Tests shall be carried out according to the methods prescribed in IS: 548-1964\* and the Appendix. References to the relevant clauses of that standard are given in col-5 of Table 1.

7.2 **Quality of Reagents** — Unless specified otherwise, pure chemicals and distilled water (see IS: 1070-1960†) shall be used in tests.

NOTE — 'Pure chemicals' shall mean chemicals that do not contain impurities which affect the results of analysis.

# APPENDIX A

[Table 1, Item (viii)]

## SOLIDIFICATION TEST

### A-1. METHOD OF TEST

A-1.0 **General** — The dried oil is kept in refrigerator at 2°C for 24 hours. It shall be cloudy and dull when removed and shall flow slowly when warmed to 8° to 10°C.

\*Methods of sampling and test for oils and fats (revised).

†Specification for water, distilled quality (revised).

**A-1.1 Apparatus**

**A-1.1.1 Measuring Cylinder** — 100 ml measuring capacity.

**A-1.1.2 Desiccator** — Containing an efficient desiccant, such as phosphorus pentoxide.

**A-1.1.3 Air-Oven** — Preferable electrically heated with temperature control device.

**A-1.1.4 Refrigerator** — With facility for measuring the temperature.

**A-1.2 Preparation of the Sample** — Dry a little more than 100 ml of the material thoroughly by keeping in an air-oven maintained at  $105^{\circ} \pm 2^{\circ}\text{C}$ . The material shall be taken to be thoroughly dried when two successive weighings of the material, after removal from oven and cooling in desiccator to room temperature, do not differ by more than one milligram.

**A-1.3 Procedure** — Fill to 100-ml mark a 100-ml measuring cylinder with the dried material and place in the refrigerator maintained at  $2^{\circ}\text{C}$  for 24 hours.

On removal after 24 hours from refrigerator, the oil shall flow, although slowly. The material at that temperature shall be cloudy and dull. Warm it to  $8^{\circ}$  to  $10^{\circ}\text{C}$ .

**A-1.3.1** The material shall be taken to have passed the test, if it is clear and bright when warmed to  $8^{\circ}$  to  $10^{\circ}\text{C}$  after removal from refrigerator.

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